



COVER SHEET

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UNDERPINNED BY FEAR: PARENTS MANAGEMENT OF CHILDHOOD FEVER

If you ask parents 'What were you most afraid of during your first few years as a parent?' many will say 'fever'. Overseas research in this area has spanned 25 years. Yet, parents concerns remain the same; fever can cause febrile convulsions, brain damage and death. More recently parents are also concerned about dehydration and discomfort. Medications, paracetamol and ibuprofen, are the preferable method of managing fevers for many parents. Reducing fever gives them a feeling of control and mastery; they want to protect their child from harm. However, incorrect medication dosing is common. Underdosing is more frequent and leads to increased health service usage. Overdosing or prolonged use can cause liver damage and renal failure.

Over the past few years parents have been advised by health professionals to alternate paracetamol and ibuprofen if a temperature has not reduced sufficiently or returns within a few hours. This has led to an increase in medication usage with an associated increase in dosage errors and a threefold increase in overdosing. An American study found only one in twelve children correctly medicated with both medications in both dosage and frequency of administration. The safety of this practice has not been determined.

Researchers at the Institute for Health and Biomedical Innovation, Queensland University of Technology found Queensland parents to have similar concerns about childhood fever. Parents believe fever causes dehydration, brain damage, febrile convulsions, and death. These beliefs create parental stress when their child is febrile. Other factors increasing concerns are fevers lasting two or more days, rapidly rising temperatures and receiving conflicting information about how best to care for a febrile child. A diagnosis of a viral illness is comforting for some, but not all. *"It's just a virus." I think, how can you just look at them and say "It's just a virus." How do you know it's not meningitis?* Media coverage of meningococcal cases, particularly those not diagnosed on first contact with a medical practitioner increase concerns. Medication was the most preferred method of reducing fever. Some parents reduced temperatures above 38.0°C, others 39.0°C and all were concerned about and reduced temperatures of 40.0°C or higher.

Normal body temperature is maintained at a relatively constant level by the thermoregulatory 'set point' in the anterior hypothalamus. Fever indicates a resetting of the hypothalamic set point in response to an invading organism. Normal body temperature varies with age, time of day, physical activity, environmental conditions and the amount of clothing worn. Circadian rhythms cause a 0.6°C – 0.8°C variations in body temperature during each 24 hour period, highest late afternoon – early evening and lowest in the early morning. Adults' normal body temperatures range from 37.2°C to 37.8°C. Infants' normal body temperature are higher than older children and adults and under greater circadian influence, therefore they are higher have a greater circadian fluctuation. Parents are sometimes concerned about and use medications to reduce normal temperatures, 38.0°C or lower.

Parents do not receive consistent evidence-based information about fever management from health professionals. Some health professionals are concerned about febrile convulsions and brain damage associated with childhood fevers. Febrile convulsions occur in 2% to 5% of all children. They are benign events in children up to 5 years of age and have no long term neurological or physical effects and specific risk factors.

Health professionals must update their knowledge and provide consistent evidence-based information to parents. Ideally parents should learn about fever and fever management prior to their first experience with a childhood fever. Knowing what is happening and how to manage the fever will provide a sense of mastery. Generally, parents are open to education and alternative plans when they feel health professionals have listened to them, and their concerns have been addressed. Health professionals must listen to parents' fears and concerns. They will then be positioned to target education to reduce specific concerns. Providing parents with a fever management plan including advice on when to seek follow-up assistance if the child is not improving or deteriorating will reassure parents and give them a feeling of control. The determination of the need of antipyretics from temperature alone must be discouraged.

Most parents visit either their general practitioner or child health nurse for growth and development checks and immunisations. Education during these well-child visits would prepare parents for the inevitable event, their child's first febrile illness. Reinforcement of evidence-based fever management practices by general practitioners and nurses during a visit when the child is febrile will ensure parents do not receive conflicting information, increasing their concerns during this difficult time. Parents aware of when to seek medical assistance for a febrile child will no longer inappropriately seek assistance for minor viral illnesses. Inappropriate health service use will reduce.

The Queensland University of Technology study of 400 Queensland parents will provide a clearer understanding of parents' beliefs about fever, their practices and the factors influencing their practices enabling education programs to be developed and trialled to assist parents during these emotionally challenging experiences – childhood fevers.

ADVICE FOR PARENTS WHEN CARING FOR A SICK CHILD

- mild to moderate fever is beneficial and supports the immune system
- observe the child, focus on the child's well-being rather than temperature
- make the child comfortable
- dress in light clothing
- encourage fluids – small, frequent drinks of clear liquid, eg., water or diluted juice
- reduce activity
- light blanket for children who are cold or shivering
- selectively reduce fevers with medications when fever is:
 - greater than 39.0°C and associated with discomfort
 - 40°C or higher and
 - in all children who are irritable, miserable or appear to be in pain
- medication dosages for children up to 6 years:
 - paracetamol 15mg/kg every 4 hours up to 4 times a day, maximum 1g/day
 - ibuprofen 10mg/kg 3 to 4 times a day, maximum of 1.2g/day
 - always administer with food or milk
 - not for use in children under 6 months of age
 - aspirin should be avoided
- do not continue giving regular medication for more than 48 hours without having your child assessed by a doctor

**SEEK MEDICAL ATTENTION IF THERE
IS NO IMPROVEMENT IN 48 HOURS OR IF THE CHILD**

- is febrile and under 6 months of age
- looks 'sick', pale, lethargic or weak
- suffers severe headache, neck stiffness or light hurts their eyes
- has breathing difficulties
- refuses to drink
- persistently vomits
- shows signs of drowsiness
- suffers pain
- has a rash of red-purple spots

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